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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/591,320

06/02/2007

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107348-00603

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4372 7590 04/15/2010
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EXAMINER

DODD, RYAN P

ART UNIT

PAPER NUMBER

3655

NOTIFICATION DATE

DELIVERY MODE

04/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/591,320 | Applicant(s) TSUBOI ET AL. | |
| | Examiner RYAN DODD | Art Unit 3655 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/1/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the amendment received December 29, 2009. Amendments to the Claims, along with Remarks have been received, entered, and are being considered by Examiner. Claims 3-12 have been added. Claims 1-12 are currently pending.

Information Disclosure Statement

The Information Disclosure Statement filed October 1, 2009 has been received and is being considered by the Examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

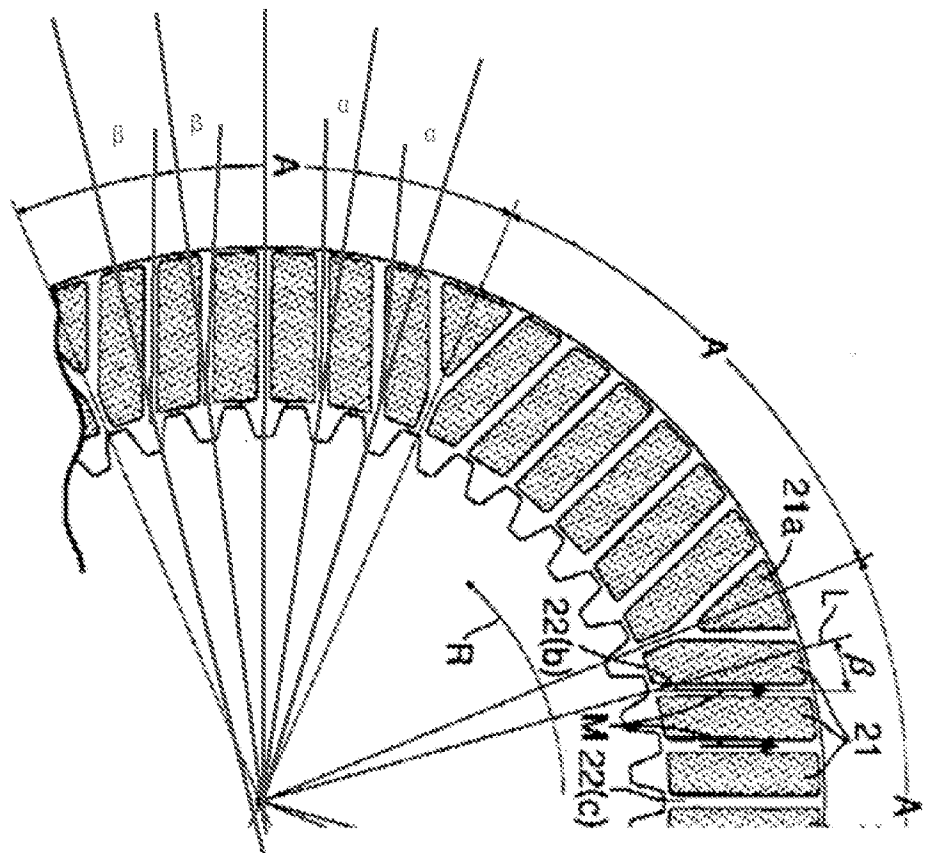
Claims 4-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

Art Unit: 3655

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In Applicant's disclosure, on page 2, lines 27-29, of the specification, Applicant discloses one oil channel and another oil channel that are positioned at opposite end parts in the peripheral direction of each region are given the discharge angle and the inflow angle respectively (See also figs. 2-4). However, on page 3 lines 2-3, applicant discloses that it is possible to easily form the **plurality of oil channels having an inflow angle and a discharge angle**, implying that all oil channels have such an angle. Also in claim 1, lines 10-11, Applicant claims a "plurality of oil channels including a plurality of discharge oil channels having a discharge angle (β) relative to a radial line (L)", and in lines 14-16, Applicant claims a "the plurality of oil channels further include a plurality of inflow channels having an inflow angle (α) relative to the radial line (L) of the friction plate."

It is clear that applicant is claiming a plurality of inflow channels and discharge channels relative to a radial line (L). The problem is that a radial line (L) can be drawn to any of the plurality of inflow and discharge oil channels, resulting in multiple diverse inflow and discharge angles being realized (See figure below). It therefore contradicts the assertion in claims 4-6 that "the discharge angle (β) is equal to the inflow angle (α)", because there are multiple diverse discharge and inflow angles, and not all discharge angles are equal to all inflow angles.



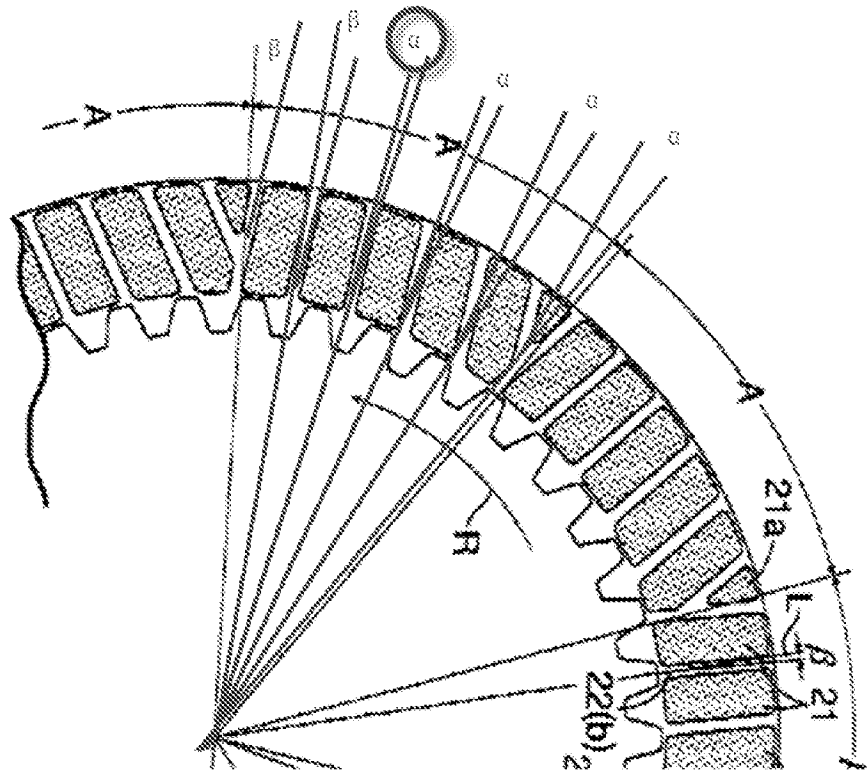
Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In Applicant's disclosure, On page 2, lines 27-29, of the specification, Applicant discloses one oil channel and another oil channel that are positioned at opposite end parts in the peripheral direction of each region are given the discharge angle and the

Art Unit: 3655

inflow angle respectively (See also figs. 2-4). However, on page 3 lines 2-3, applicant discloses that it is possible to easily form the plurality of oil channels having an inflow angle and a discharge angle, implying that all oil channels have such an angle. Also in claim 1, lines 10-11, Applicant claims a "plurality of oil channels including a plurality of discharge oil channels having a discharge angle (β) relative to a radial line (L)", and in lines 14-16, Applicant claims a "the plurality of oil channels further include a plurality of inflow channels having an inflow angle (α) relative to the radial line (L) of the friction plate."

It is clear that applicant is claiming a plurality of inflow channels and discharge channels relative to a radial line (L). The problem is that a radial line (L) can be drawn to any of the plurality of inflow and discharge oil channels, resulting in multiple inflow and discharge angles being realized (See figure below). It therefore contradicts the assertion in claims 7-9 that "the discharge angle (β) is less than the inflow angle (α)", because there are multiple diverse discharge and inflow angles, and not all discharge angles are less than all inflow angles. In fact, **it appears to be the inflow angle (circled below) directly adjacent to the discharge angle identified by applicant in fig. 4 that is the smallest angle of them all.**



The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Based on the analysis above, Claims 4-9 appear to be inaccurate and indefinite, because the claims recite a plurality of inflow and discharge channels, and then claim that one discharge angle is equal to or less than one inflow angle, when there are actually multiple inflow and discharge angles as

Art Unit: 3655

defined in the specification and claim(s) which do not meet this criteria for any embodiment of the invention.

Claims **1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "clutch" in line 6. There is insufficient antecedent basis for this limitation in the claim. While it is apparent that applicant may be referring to the "clutch plate", it should be claimed as such to avoid the implication that applicant is claiming a separate clutch.

Claim 1 recites the limitation "core plates" in line 6. There is insufficient antecedent basis for this limitation in the claim. Applicant has not yet claimed multiple core plates. Line 6 should more properly read "...between the clutch plate and the core plate".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

As best understood, **Claims 1-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oguri et al. US Patent 6899783 (henceforth Oguri '783), in view of Hattori US 2001/0023803 (henceforth Hattori '803). The applied reference henceforth Oguri '783 has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

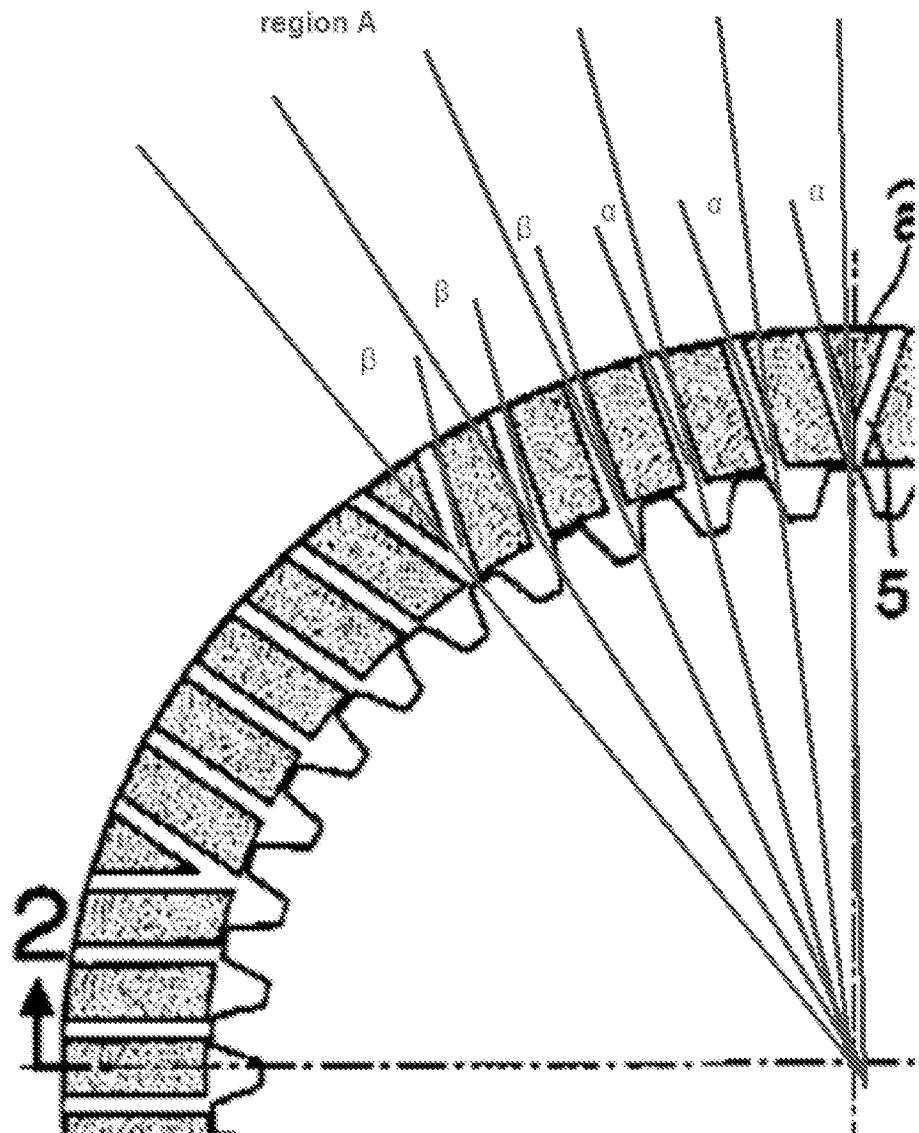
Oguri '783 discloses:

- A wet clutch friction plate comprising:
- friction material (friction member 4) bonded to a side face of a core plate (2),

Art Unit: 3655

wherein a plurality of oil channels (oil grooves 5) are defined in the friction material and provide communication between inner and outer peripheral edges of the friction material,

- wherein the plurality of oil channels include a plurality of discharge oil channels having a discharge angle (β) relative to a radial line (L) of the friction plate and which are configured to discharge oil from an inner peripheral side to an outer peripheral side of the friction plate due to a screw pump action that occurs when the friction plate rotates relative to the clutch plate, and the plurality of oil channels further include a plurality of inflow oil channels having an inflow angle (α) relative to the radial line (L) of the friction plate and which are configured to draw oil in from the outer peripheral side to the inner peripheral side of the friction plate due to the screw pump action that occurs when the friction plate rotates relative to the clutch plate (see figure below), and
- wherein the discharge angle (β) inclines rearward relative to the radial line (L) and the inflow angle (α) inclines forward relative to the radial line (L) (see figure below).



Vogele '893 **does not explicitly disclose:**

a clutch plate, and that the core plate is disposed opposite the clutch plate and rotatable relative to the clutch, and so then the friction material is disposed between the clutch and core plates. However, Hattori '803 discloses a clutch plate (24, 25, fig. 8),

Art Unit: 3655

along with core plates (50) with friction material (51), with the friction material being disposed between the clutch and core plates, which will then exhibit a screw pump action when the clutch and core plates rotate relative to one another. It would have been obvious to one having ordinary skill in the art at the time the invention was made to take the core plate of Vogele '893, which has friction material on it, and arrange it adjacent to a clutch plate as shown in Hattori '803, because substituting various core plates/friction plates between clutch plates involves only routine skill in the art.

It is common in the art to arrange friction material on either the core plate or the clutch plate or both. Because the inflow and outflow channels of Vogele '893 are arranged in a similar fashion to the present invention as claimed it can be said that Vogele '893's channels will perform in the same manner as the present invention (causing the inflow and discharge of oil). Also, because the clutch and core plates of Hattori '803 will rotate relative to one another in a similar fashion as the present invention, it can be said that the clutch plates and core plates of Hattori '803 will exhibit a "screw pump action", as defined in applicant's specification.

As to **claims 2 and 3**, Oguri '783 discloses:

- wherein the friction plate (48) is divided into a plurality of regions (A) arranged in the peripheral direction, each region including an equal number of discharge and inflow oil channels (see figure above).

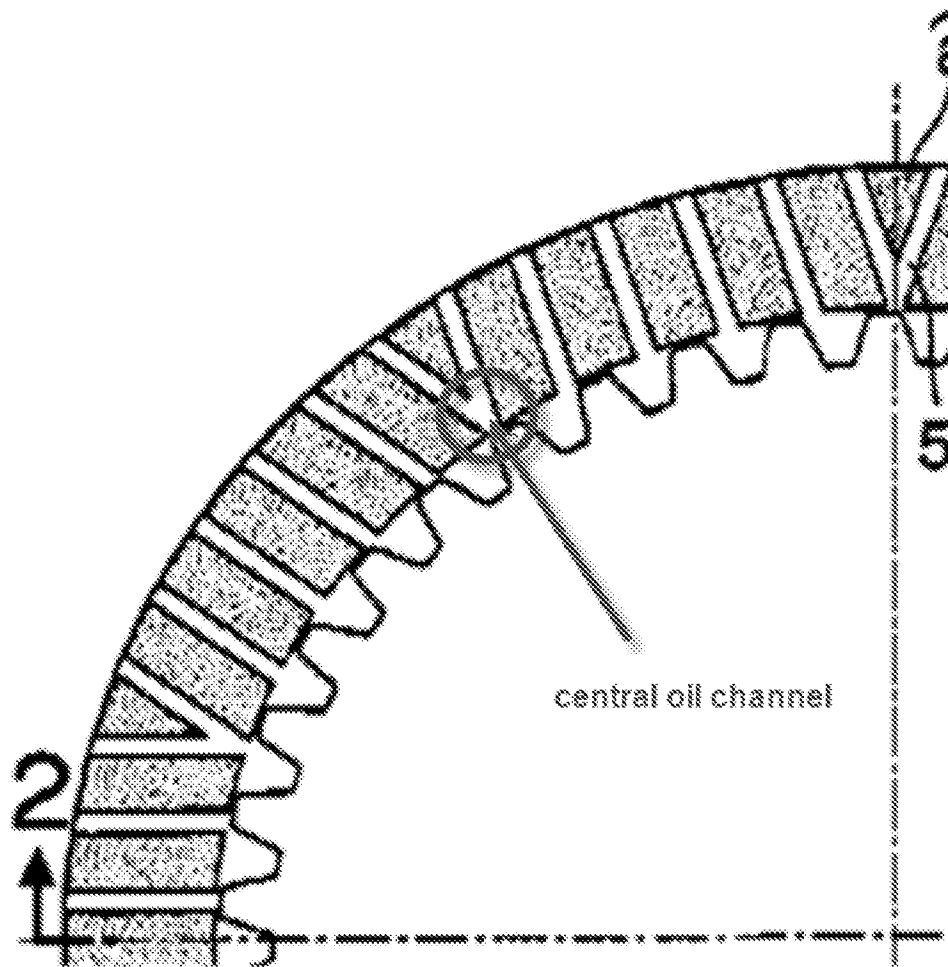
Art Unit: 3655

- wherein a triangular piece of the friction material is provided at a boundary defined between adjacent regions (A and A) (see fig. 1).

As to **claims 4-9**, at least one discharge angle of Oguri '783 is equal to at least one inflow angle, and at least one discharge angle is less than at least one inflow angle, as measured from a radial line L (See figure above).

As to **claims 10-12**, Oguri '783 discloses:

- comprising a central oil channel (see figure below) defined in the friction material, the central oil channel being positioned intermediate the discharge oil channels and the inflow oil channels, wherein the central oil channel is disposed along the radial line (L) of the friction plate.
- wherein the plurality of discharge oil channels are parallel relative to each other, and,
- wherein the plurality of inflow oil channels are parallel relative to each other.



Response to Arguments

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN DODD whose telephone number is (571)270-1161. The examiner can normally be reached on Monday thru Friday, 9:00A-6:30P, with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571)272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Dodd/

/David D. Le/
Primary Examiner, Art Unit 3655
04/10/2010